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REVIEWS

The Association for Symbolic Logic publishes analytical reviews of selected books and articles in the field of symbolic logic. The reviews were published in ***The Journal of Symbolic Logic*** from the founding of the JOURNAL in 1936 until the end of 1999. The Association moved the reviews to this BULLETIN, beginning in 2000.

The Reviews Section is edited by Alasdair Urquhart (Managing Editor), Lev Beklemishev, David M. Evans, Erich Grädel, Geoffrey P. Hellman, Denis Hirschfeldt, Thomas J. Jech, Julia Knight, Michael C. Laskowski, Volker Peckhaus, Wolfram Pohlers, and Sławomir Solecki. Authors and publishers are requested to send, for review, copies of books to *ASL, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, NY 12604, USA.*

In a review, a reference "JSL XLIII 148," for example, refers either to the publication reviewed on page 148 of volume 43 of the JOURNAL, or to the review itself (which contains full bibliographical information for the reviewed publication). Analogously, a reference "BSL VII 376" refers to the review beginning on page 376 in volume 7 of this BULLETIN, or to the publication there reviewed. "JSL LV 347" refers to one of the reviews or one of the publications reviewed or listed on page 347 of volume 55 of the JOURNAL, with reliance on the context to show which one is meant. The reference "JSL LIII 318(3)" is to the third item on page 318 of volume 53 of the JOURNAL, that is, to van Heijenoort's *Frege and vagueness*, and "JSL LX 684(8)" refers to the eighth item on page 684 of volume 60 of the JOURNAL, that is, to Tarski's *Truth and proof*.

References such as 49***5*** or 280***I*** are to entries so numbered in *A bibliography of symbolic logic* (the JOURNAL, vol. 1, pp. 121–218).

HERBERT B. ENDERTON. ***A Mathematical Introduction to Logic.*** Harcourt/Academic Press, New York and London, 2001 (Second edition), xii + 317 pp.

This text gives a clearly written, rigorous and detailed presentation of, in the words of the author, "the basic concepts and results of logic: the topics are proofs, truth, and computability" (ix). After over thirty years of wide use in colleges and universities throughout the United States, the first edition has earned the reputation of being the definitive text for a junior-senior level undergraduate course in mathematical logic. The reviewer projects the second edition will continue to hold this status.

The material and its organization remain almost exactly the same as in the first edition. The book is composed of four weighty chapters. Propositional logic is covered in Chapter 1. Chapter 2 gives a thorough introduction to first-order logic, covering truth and models, formal deductions, and the Compactness, Soundness, and Completeness Theorems. Chapter 3 covers number theory and reducts and subtheories of number theory, Gödel's First and Second Incompleteness Theorems, and recursive functions and undecidability. An introduction to second-order logic is given in Chapter 4.

There is greater emphasis on computability throughout this edition, and the section on "Effectiveness and Computability" has been non-trivially expanded. The section on models of theories now includes material on finite models. Indicated are some sections which can be postponed or even omitted. For instance, the section on "Induction and Recursion," which can be difficult for many students, occurs two sections later, and can even be postponed

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